



PATENT

Attorney Docket No. 01017/37128C

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Medlock et al.

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Serial No.: 10/037,591

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Filed: December 21, 2001

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For: IL-17 Like Molecules and Uses  
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Group Art Unit: TBA

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Examiner: TBA

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**IN THE CLAIMS**

*Please amend claims 4, 12, 16, 18-26, 28, 31, 50, 51, 54, 57, 59, 60, 62-67 70, 73, and 74 as follows.*

4. A vector comprising the nucleic acid molecule of claim 1.
12. A process for determining whether a compound inhibits IL-17-like polypeptide activity or production comprising exposing a host cell according to Claim 5 to the compound and measuring IL-17- like polypeptide activity or production in said host cell.
16. An isolated polypeptide encoded by the nucleic acid molecule of claim 1.
18. A polypeptide according to claim 14 wherein the amino acid at position 67 of SEQ ID NO: 2 is asparagine or glutamine.
19. A polypeptide according to claim 14 wherein the amino acid at position 69 of SEQ ID NO: 2 is arganine, lysine, glutamine or asparagine.
20. A polypeptide according to claim 14 wherein the amino acid at position 94 of SEQ ID NO: 2 is serine, alanine or cysteine.
21. A polypeptide according to claim 14 wherein the amino acid at position 96 of SEQ ID NO: 2 is serine, alanine or cysteine.
22. A polypeptide according to claim 14 wherein the amino acid at position 101 of SEQ ID NO: 2 is valine, isoleucine, lecune, phenylalanine, alanine or norleucine.
23. A polypeptide according to claim 14 wherein the amino acid at position 104 of SEQ ID NO: 2 is serine, or threonine.
24. A polypeptide according to claim 14 wherein the amino acid at position 129 of SEQ ID NO: 2 is serine, alanine or cysteine.
25. A polypeptide according to claim 14 wherein the amino acid at position 140 of SEQ ID NO: 2 is serine, alanine or cysteine.
26. A polypeptide according to claim 14 wherein the amino acid at position 186 of SEQ ID NO: 2 is serine, alanine or cysteine.

28. An antibody or fragment thereof that specifically binds the polypeptide of claim 14.

31. A method of detecting or quantitating the amount of IL-17 like polypeptide using the anti-IL-17 like antibody or fragment of claim 27.

50. A hybridoma that produces a selective binding agent capable of binding a polypeptide according to claim 1.

51. A composition comprising the polypeptide of claim 13 and a pharmaceutically acceptable formulation agent.

54. A polypeptide comprising a derivative of the polypeptide of claim 13.

57. A composition comprising a nucleic acid molecule of claim 1 and a pharmaceutically acceptable formulation agent.

59. A viral vector comprising a nucleic acid molecule of claim 1.

60. A fusion polypeptide comprising the polypeptide of claim 13 fused to a heterologous amino acid sequence.

62. A method for treating, preventing or ameliorating a medical condition comprising administering to a patient the polypeptide selected from the group consisting of SEQ ID NO: 2, SEQ ID NO: 4, and SEQ ID NO: 10 or the polypeptide encoded by the nucleic acid of claim 1.

63. A method of diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprising:

(a) determining the presence or amount of expression of the polypeptide selected from the group consisting of SEQ ID NO: 2, SEQ ID NO: 4, and SEQ ID NO: 10 or the polypeptide encoded by the nucleic acid molecule of claim 1 in a sample; and

(b) diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or amount of expression of the polypeptide.

64. A device comprising:

(a) a membrane suitable for implantation; and

(b) cells encapsulated within said membrane, wherein said cells secrete a protein of claim 13, and wherein said membrane is permeable to said protein and impermeable to materials detrimental to said cells.

65. A method of identifying a compound which binds to a polypeptide comprising:

(a) contacting the polypeptide of claim 13 with a compound; and

(b) determining the extent of binding of the polypeptide to the compound.

66. A method of modulating levels of a polypeptide in an animal comprising administering to the animal the nucleic acid molecule of claim 1.

67. A transgenic non-human mammal comprising the nucleic acid molecule of claim 1.

70. The method of claim 69 wherein said molecule is the selective binding agent of claim 32.

73. A method of inhibiting undesirable interaction of IL-17 receptor like polypeptide with IL-17E ligand comprising administering a therapeutically effective amount of a molecule capable of inhibiting binding of IL-17 like polypeptide to IL-17 receptor RB-2 or RB-3, wherein said molecule is the selective binding agent of claim 32.

74. A method of antagonizing the activity of an IL-17 like polypeptide comprising administering an effective amount of a polypeptide of claim 14 or an IL-17 like polypeptide selective binding agent, small molecule, antisense oligonucleotide, peptide or derivatives thereof having specificity for IL-17 like polypeptide.

## II. REMARKS

By the foregoing amendment to the specification the applicants have replaced the Sequence Listing of record with a substitute Sequence Listing. The applicants request entry of the foregoing amendment to correct the Sequence Listing filed as part of the specification in the above-identified application. Accompanying the paper copy of the substitute Sequence Listing is a computer readable version of the substitute Sequence Listing as well as a "Statement Pursuant to 37 C.F.R. §1.825(a) and (b)".

The changes embodied in substitute Sequence Listing pertain only to compliance with formatting rules. The substitute Sequence Listing corrects the "general information" section of the Sequence Listing. In particular, the total number of sequences (<160>) has been corrected to recite "24". Also fields <140> and <141> have been updated to include the current application number "10/037,591" and filing date "2001-12-21", respectively. In view of the foregoing, the applicants submit that no new matter has been added via the submission of the substitute Sequence Listing.

By the foregoing amendment to the claims the applicants have simply removed multiple dependent claims (see Appendix A for "Version of Claims with Markings to Show Changes Made"). After entry of the foregoing amendment there will be a total of 78 claims at issue (58 additional claims in total), with 18 independent claims (15 additional independent claims). There are no multiple dependent claims at issue.

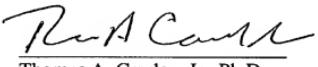
In view of the foregoing the applicants have enclosed herewith a check in the amount of \$3044 (\$740 basic filing fee; \$1260 for 15 additional independent claims; \$1044 for 58 additional claims in total). Should the applicants calculations be in error regarding the filing fee or excess claim fees due, any such additional fees may be charged to deposit account no. 13-2855.

Finally, enclosed herewith is a duly executed inventor declaration/power of attorney along with the requisite fee (\$130) for late submission of the document.

Respectfully submitted,

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## APPENDIX A

## "Version of Claims with Markings to Show Changes Made"

4. A vector comprising the nucleic acid molecule of [Claims 1, 2, or 3] claim 1.
12. A process for determining whether a compound inhibits IL-17-like polypeptide activity or production comprising exposing a host cell according to Claim 5[, 6 or 7] to the compound and measuring IL-17- like polypeptide activity or production in said host cell.
16. An isolated polypeptide encoded by the nucleic acid molecule of [Claims 1, 2, or 3] claim 1.
18. A polypeptide according to claim 14 [or 15] wherein the amino acid at position 67 of SEQ ID NO: 2 is asparagine or glutamine.
19. A polypeptide according to claim 14 [or 15] wherein the amino acid at position 69 of SEQ ID NO: 2 is arganine, lysine, glutamine or asparagine.
20. A polypeptide according to claim 14 [or 15] wherein the amino acid at position 94 of SEQ ID NO: 2 is serine, alanine or cysteine.
21. A polypeptide according to claim 14 [or 15] wherein the amino acid at position 96 of SEQ ID NO: 2 is serine, alanine or cysteine.
22. A polypeptide according to claim 14 [or 15] wherein the amino acid at position 101 of SEQ ID NO: 2 is valine, isoleucine, lecune, phenylalanine, alanine or norleucine.
23. A polypeptide according to claim 14 [or 15] wherein the amino acid at position 104 of SEQ ID NO: 2 is serine, or threonine.
24. A polypeptide according to claim 14 [or 15] wherein the amino acid at position 129 of SEQ ID NO: 2 is serine, alanine or cysteine.
25. A polypeptide according to claim 14 [or 15] wherein the amino acid at position 140 of SEQ ID NO: 2 is serine, alanine or cysteine.
26. A polypeptide according to claim 14 [or 15] wherein the amino acid at position 186 of SEQ ID NO: 2 is serine, alanine or cysteine.

28. An antibody or fragment thereof that specifically binds the polypeptide of [Claims 13, 14, or 15] claim 14.

31. A method of detecting or quantitating the amount of IL-17 like polypeptide using the anti-IL-17 like antibody or fragment of [Claims 27, 28, or 29] claim 27.

50. A hybridoma that produces a selective binding agent capable of binding a polypeptide according to [Claims 1, 2, or 3] claim 1.

51. A composition comprising the polypeptide of [Claims 13, 14, or 15] claim 13 and a pharmaceutically acceptable formulation agent.

54. A polypeptide comprising a derivative of the polypeptide of [Claims 13, 14, or 15] claim 13.

57. A composition comprising a nucleic acid molecule of [Claims 1, 2 or 3] claim 1 and a pharmaceutically acceptable formulation agent.

59. A viral vector comprising a nucleic acid molecule of [Claims 1, 2, or 3] claim 1.

60. A fusion polypeptide comprising the polypeptide of [Claims 13, 14 or 15] claim 13 fused to a heterologous amino acid sequence.

62. A method for treating, preventing or ameliorating a medical condition comprising administering to a patient the polypeptide selected from the group consisting of SEQ ID NO: 2, SEQ ID NO: 4, and SEQ ID NO: 10 [of Claims 13, 14 or 15] or the polypeptide encoded by the nucleic acid of claim 1 [Claims 1, 2, or 3].

63. A method of diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprising:

(a) determining the presence or amount of expression of the polypeptide [of Claims 13, 14, or 15 selected from the group consisting of SEQ ID NO: 2, SEQ ID NO: 4, and SEQ ID NO: 10 or the polypeptide encoded by the nucleic acid molecule of [Claims 1, 2, or 3] claim 1 in a sample; and

(b) diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or amount of expression of the polypeptide.

64. A device comprising:

(a) a membrane suitable for implantation; and

(b) cells encapsulated within said membrane, wherein said cells secrete a protein of [Claims 13, 14 or 15] claim 13, and wherein said membrane is permeable to said protein and impermeable to materials detrimental to said cells.

65. A method of identifying a compound which binds to a polypeptide comprising:

(a) contacting the polypeptide of [Claims 13, 14 or 15] claim 13 with a compound; and

(b) determining the extent of binding of the polypeptide to the compound.

66. A method of modulating levels of a polypeptide in an animal comprising administering to the animal the nucleic acid molecule of [Claims 1, 2, or 3] claim 1.

67. A transgenic non-human mammal comprising the nucleic acid molecule of [Claims 1, 2, or 3] claim 1.

70. The method of claim 69 wherein said molecule is the selective binding agent of claim 32 [or 34].

73. [The method of claim 72 wherein said molecule is the selective binding agent of claim 32 or 34] A method of inhibiting undesirable interaction of IL-17 receptor like polypeptide with IL-17E ligand comprising administering a therapeutically effective amount of a molecule capable of inhibiting binding of IL-17 like polypeptide to IL-17 receptor RB-2 or RB-3, wherein said molecule is the selective binding agent of claim 32.

74. A method of antagonizing the activity of an IL-17 like polypeptide comprising administering an effective amount of a polypeptide of claim 14 [or 15] or an IL-17 like polypeptide selective binding agent, small molecule, antisense oligonucleotide, peptide or derivatives thereof having specificity for IL-17 like polypeptide.